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**Maier et al.**

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(54) **SOLUBLE POWDER FOR ESPRESSO TYPE BEVERAGE**

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(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,746,527 A 5/1988 Kuypers ..... 426/569

5,620,733 A 4/1997 Chaveron et al. .... 426/580  
5,882,716 A 3/1999 Munz-Schaerer et al. ... 426/591  
5,882,717 A \* 3/1999 Panesar et al. .... 426/595  
6,098,524 A \* 8/2000 Reese ..... 99/280  
6,168,819 B1 \* 1/2001 Zeller et al. .... 426/569

**FOREIGN PATENT DOCUMENTS**

EP 0 885 566 A1 12/1998  
EP 0 891 715 A1 1/1999  
EP 1 135 992 A1 9/2001

\* cited by examiner

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(57) **ABSTRACT**

The present invention relates to a soluble coffee beverage which closely assimilates the texture characteristics of an Italian espresso, namely a beverage with a fine crema, but which has a reduced bitterness compared with freshly brewed espresso but which nevertheless is strong in aroma. The soluble coffee beverage powder includes a soluble gas containing matrix that has between 10% and 35% soluble coffee solids by weight of the total dry matter of the matrix, from about 10% to about 35% pre-flocculated creamer by weight, and from about 12% to about 30% oligosaccharides effective to dilute protein in the creamer by weight. The soluble beverage powder upon reconstitution with hot water provides a foamed upper surface based upon all of the ingredients, and in which the foamed upper layer substantially all of the foam is made up of bubbles having a diameter in the range of 0.05 to 0.5 mm. In another aspect, the invention relates to a process for making such a product.

**8 Claims, No Drawings**